12 May 1997

ENGLISH ONLY

COMMISSION ON SCIENCE AND TECHNOLOGY
FOR DEVELOPMENT
Third session
Geneva, 12 May 1997

"TOWARDS A COMMON VISION ON THE FUTURE OF SCIENCE AND TECHNOLOGY FOR DEVELOPMENT"*

Summary of the discussions held at the Workshop on:

I. The Impact of Science and Technology on Development: "Conceptual and Concrete Issues", and

II. Generic and Sectoral Issues in Science Policy for Development

Ocho Rios, Jamaica
30 April - 2 May 1997

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*The attached summary of the discussions at the Workshop organized upon the decision of the Bureau of the Commission on Science and Technology for Development is circulated in the language in which it was received from the Workshop.

E/CN.16/1997/Misc.1

GE.97-50882

Introduction

1. This was the first of a series of four or five small substantive workshops proposed by the CSTD Working Group on the formulation of a "common vision for the future contribution of science and technology for development". The full report, including the reports of all the substantive workshops, will be prepared for the fourth session of the CSTD in 1999 on the occasion of the 20th anniversary of the United Nations Conference on Science and Technology for Development. The workshop's objective was to identify important elements of the themes indicated in the title. It was held as a brainstorming meeting with a brief note of the Chairman as input. The workshop participants met in Ocho Rios, Jamaica, upon the invitation of the National Science and Technology Commission.

Discussion - Theme I: The impact of science and technology on development: "Conceptual and concrete issues"

2. There was a common understanding that the great hope that had been associated with the 1979 United Nations Conference on Science and Technology for Development had to a large extent not materialized. Therefore, the approach chosen by the CSTD Working Group on a "Common Vision" started at the other end of the spectrum with small substantive workshops rather than a "summit". This effort was meant as an invitation to think about practical approaches to science and technology in a context of development and innovation. While most of the industrialized countries have developed for themselves national science and technology policies as a framework for the S&T infrastructure, a Common Vision developed by the CSTD could assist developing countries in their efforts to do likewise while at the same time addressing sectoral issues that required a global response or dialogue.

3. Participants addressed a number of areas that were relevant in conceiving a Common Vision: concepts of development, the positive and negative aspects of S&T, the relationship between S&T and society, the societal assessment of S&T and research, methodological problems in dealing with the future as well as the question what would happen if nothing were done by the international community.

4. It was seen as useful to note that S&T was not restricted to the formal system of research but encompassed also learning and innovative processes that created functional knowledge, which is partly tacit, and can partly be codified. The possibility of sharing these forms of knowledge is an important element in the relation between S&T and development.

5. A Common Vision would have to be a long-term concept with a minimum time framework of one generation. History teaches that S&T can be useful only if applied in a constructive manner. Too often that was not the case: while great progress has been made over the past 50 years, more people are now living in poverty than ever before and gaps between rich and poor have increased. In many countries, this has led to great conflict and social destabilization. The results of that destabilization are even felt in the industrialized countries (for example through the international drug and arms trades). How can S&T intervene in a constructive manner to turn such developments around? It is important to start with the notion that categories such as "money", "trade" or "growth" do not always equal "development", but the fact that every child has access to the benefits of S&T such as improved food, medicines etc. does. Such basic access to the benefits of S&T could be seen as a global entitlement to knowledge.

6. An important element in finding useful applications for S&T in a country is the ability to organize knowledge, to use data effectively and to make life more predictable for those at the poorer ends of society. At a time when governments and the civil society struggle to face the demands of global transformation, S&T could be an important tool. A recent European Union study was entitled "Science and technology in the service of people". Only such a view can prevent the marginalization of large parts of the world population if elevated to a notion of global validity. Access to knowledge remains a crucial factor in development. It was noted that Japan had in its constitution an

article guaranteeing every citizen access to a basic level of education and well-being. Could this concept be elevated to a global entitlement for the least developed countries to enable them to reap the benefits of S&T? How might such a notion be translated into practical steps?

7. The above considerations led to a number of conclusions, for example on the need to popularize S&T, to increase S&T literacy and to develop a wider perspective of making S&T a shared learning activity and linking it generally to society.

8. While S&T can be a means to wealth creation, limiting it to this role often overlooks negative aspects. For example, forest technologies are not used in a sustainable manner in some countries while the knowledge and techniques to do so are available in other countries. Furthermore, the potential of S&T to address social issues is often overlooked. Terms such as "development" and "innovation" have to be seen against this background as well and not just in terms of economic and growth statistics.

9. Participants viewed "knowledge" as a broad concept that included both codified and "tacit knowledge". S&T was seen as not just incorporating the natural and physical sciences, but social sciences as well. A Common Vision for the future of S&T would have to take such a comprehensive view and also anticipate the goals to which innovation or learning should ultimately lead (e.g. in terms of social development, etc.). Such a vision would be a shared responsibility of people and institutions. In this context technology was not value-free, particularly in countries that could not afford to make more mistakes, but context and application -specific.

10. There seem to be two stages of development, where S&T has to play a crucial role. First, at the beginning of a development effort, for example in the LDCs where a minimum infrastructure, capital, capacity, etc. are needed. Second, in countries that have reached a certain level of development and which need very specific innovative measures to continue on that path. While the Common Vision should be global, it should particularly address the needs of the former countries. However, it should not be forgotten that even some of the countries in the latter category still face considerable levels of poverty that need to be overcome. Even the global financial institutions no longer view development in purely mechanistic terms, but now recognize the need for a holistic view of societies that encompasses measures such as poverty alleviation as a means of advancing economic development. The role of S&T should be viewed in a similar fashion.

11. There is no lack of knowledge or of S&T. Often, the problem is that of access because the technical knowledge is either patented or a military secret too expensive to be acquired; or because it is "tacit knowledge" and therefore not easily transferable and adaptable in different contexts. Here, very practical steps are necessary, addressing issues such as how to operationalize the concept of global knowledge entitlements. One reason why many United Nations Conferences have failed was seen in the fact that proposed solutions were too general or too complicated to be translated into concrete steps. Specific needs in areas such as food security, energy or health have to be identified and become part of the Common Vision.

12. Different notions of science - for example, Western, Indian, or Chinese concepts - could be considered in developing a Common Vision. How is knowledge generated in different societies? What are the biases and perceptions? Furthermore, the discussion of sustainable development has added the notion of inter-generational equity which should be reflected in the Common Vision. At the same time, some very basic issues have to be addressed: thus many countries lack minimal infrastructural requirements such as access to scientific journals. In other countries, the R&D sector is well developed and comes up with useful results, but these are not finding their way into the productive sector. This illustrates that the Common Vision will have to build a bridge from conceptual and philosophical ideas to very specific requirements.

13. What could a Common Vision do at the global level? It could create ideas and a framework for different governments and institutions of the civil society to follow at the national level. It could mobilize cooperative efforts where they are most needed, for example in LDCs. It should define the global knowledge entitlements and ways for materializing them. It could formulate at the same time guidelines for a S&T policy for developing countries in different situations.

Discussion of Theme II: Generic and sectoral issues in science policy for development

14. Instead of the term generic, one could better speak of general, cross-sectoral or inter-sectoral issues. These certainly constitute an important category of issues, which may change over time both in importance and in the manner in which they are handled.

15. A number of such issues, which can be profitably dealt with by a global forum, are for instance: basic needs and S&T, the gender dimension of S&T, access to and impact of information and communication technologies as well as biotechnology, management of S&T, issues to be solved in relation to intellectual property rights, strengthening of capacities in developing countries, the role of public and private sectors, the diffusion of environmentally sound technologies, ethical issues as well as international relations and technology cooperation. These are only a few examples, some of which the CSTD has already addressed.

16. The discussion of such issues could also be beneficial for the treatment of sectoral issues in as much as an analysis of the latter can contribute to insight into the general issues.

17. The results of analyses of such general, inter-sectoral issues could also profitably be made available within the United Nations system to more sectorally oriented organizations such as FAO, WHO, and UNIDO.

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